

What is claimed is:

1. A method for augmenting an immune response in a patient comprising the step of administering an amount of flt3-ligand to the patient sufficient to generate an increase in the number of the patient's dendritic cells.
2. A method according to claim 1, further comprising the step of administering one or more of the molecules selected from the group consisting of GM-CSF, IL-4, TNF- $\alpha$ , IL-3, c-kit ligand, and fusions of GM-CSF and IL-3.
3. A method for augmenting an immune response in a patient having an infectious disease, comprising the step of administering flt3-ligand in an amount sufficient to generate an increase in the number of the patient's dendritic cells.
4. A method according to claim 3, further comprising the step of administering one or more of the molecules selected from the group consisting of GM-CSF, IL-4, TNF- $\alpha$ , IL-3, c-kit ligand, and fusions of GM-CSF and IL-3.
5. A method according to claim 3, wherein the infectious disease is HIV.
6. A method for augmenting an immune response in a patient having a cancerous or neoplastic disease, comprising the step of administering flt3-ligand in an amount sufficient to generate an increase in the number of the patient's dendritic cells.
7. A method according to claim 6, further comprising the step of administering one or more of the molecules selected from the group consisting of GM-CSF, IL-4, TNF- $\alpha$ , IL-3, c-kit ligand, and fusions of GM-CSF and IL-3.
8. A preparation of dendritic cells having at least two cell surface markers selected from the group consisting of CD1a, HLA-DR and CD86, produced by contacting hematopoietic stem or progenitor cells with flt3-ligand.
9. A dendritic cell preparation according to claim 8 produced further by contacting the hematopoietic stem or progenitor cells with a molecule selected from the group consisting of GM-CSF, IL-4, TNF- $\alpha$ , IL-3, c-kit ligand, and fusions of GM-CSF and IL-3.

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10. An antigen-expressing dendritic cell population produced by the process of  
(a) contacting hematopoietic stem or progenitor cells with flt3-ligand in an  
amount sufficient to generate a dendritic cell population;  
(b) either (i) exposing the dendritic cells to an antigen-specific peptide or (ii)  
transfected the dendritic cells with a gene encoding an antigen-specific peptide;  
(c) allowing the dendritic cells to process and express the antigen; and  
(d) purifying the antigen-expressing dendritic cells.

11. A dendritic cell population according to claim 10 wherein step (a) of the process  
further comprises contacting the hematopoietic stem or progenitor cells with a molecule  
selected from the group consisting of GM-CSF, IL-4, TNF- $\alpha$ , IL-3, c-kit ligand, and  
fusions of GM-CSF and IL-3.

12. A method of driving hematopoietic stem or progenitor cells to a dendritic cell  
lineage comprising contacting such hematopoietic stem or progenitor cells with flt3-  
ligand.

13. A method of preparing an antigen-presenting dendritic cell population  
comprising the steps of:  
(a) contacting hematopoietic stem or progenitor cells with flt3-ligand in an  
amount sufficient to generate a dendritic cell population;  
(b) either (i) exposing the dendritic cells to an antigen-specific peptide or (ii)  
transfected the dendritic cells with a gene encoding an antigen-specific peptide;  
(c) allowing the dendritic cells to process and express the antigen; and  
(d) purifying the antigen-expressing dendritic cells.

14. A method according to claim 13, wherein step (a) further comprises contacting  
the hematopoietic stem or progenitor cells with a molecule selected from the group  
consisting of GM-CSF, IL-4, TNF- $\alpha$ , IL-3, c-kit ligand, and fusions of GM-CSF and  
IL-3.

15. A method of preparing antigen-specific T cells comprising the steps of:  
(a) contacting hematopoietic stem or progenitor cells with flt3-ligand in an  
amount sufficient to generate a dendritic cell population;

(b) either (i) exposing the dendritic cells to an antigen-specific peptide or (ii) transfecting the dendritic cells with a gene encoding an antigen-specific peptide;  
(c) allowing the dendritic cells to process and express the antigen; and  
(d) allowing the dendritic cells to present the antigen to T cells.

16. A method of enhancing a mammal's immune response to a vaccine antigen, comprising the steps of administering to such mammal an immunogenic amount of the vaccine antigen and an immunogenicity-augmenting amount of flt3-ligand in concurrent or sequential combination with such vaccine antigen.

17. A vaccine adjuvant comprising a molecule selected from the group consisting of c-kit ligand and flt3-ligand.

18. A method for inducing tolerance of graft tissue in a host, comprising administering flt3-ligand to the host in an amount sufficient to increase the number of dendritic cells.

19. A dendritic cell expansion media comprising an effective amount of flt3-ligand and a cytokine selected from the group consisting of IL-3, IL-4, GM-CSF, TNF, C-Kit ligand and GM-CSF/IL-3 fusion proteins.

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